

# SPECIAL FEATURES & OVERVIEW

*Dr. Asif Islam PT, SMC, UOS.*

# Kaltenborn theories & techniques 1958 -

- Emphasis on translatory joint play movements in relation to a treatment plane for evaluating and mobilizing joints,
- Use of grades of movement,
- The convex-concave rule,
- Three-dimensional pre-positioning
- Protecting adjacent non treated joints during procedures,
- Self-treatment,
- Ergonomic principles applied to protect the therapist.

# Application

- joint stiffness due to prolonged immobilization in plaster casts for the treatment of fractures and dislocations.
- » Symptom relief, especially for pain.
- » Relaxation of muscle spasm.
- » Stretching of shortened joint and muscle connective tissues.

# Kaltenborn-Evjenth Concept

- Evjenth expanded Kaltenborn's approach with specialized techniques for muscle stretching and coordination training.
- In particular, he believed in more intensive training for patients and developed programs that, in addition to monitoring pain and range of movement, assessed performance.
- Evjenth also modified specific exercises for patient use at home with
  - automobilization
  - autostabilization
  - autostretching

# Special features

- ❑ **Biomechanical approach to treatment and diagnosis**
- ❑ Traditional manipulative technique incorporated **long-lever** rotational movements.
- ❑ The compressive forces produced by these long-lever rotational movements sometimes injured joints.

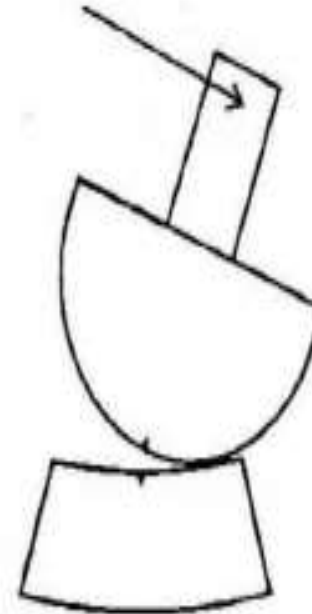
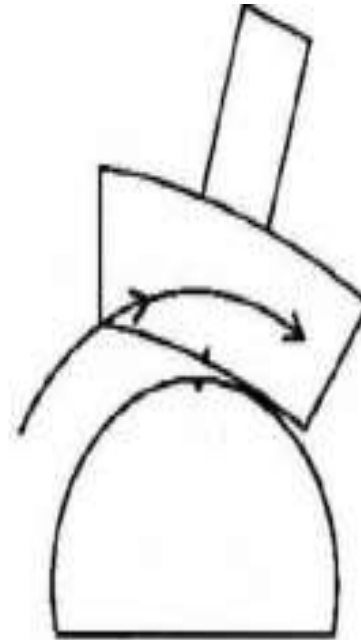


Figure 1.5

*Prior to 1952, practitioners used long-lever rotation techniques (passive continuation of active movement)*

- In the early 1900's, James Mennell, M.D. introduced **shorter lever** rotational manipulations which reduced the possibility of joint damage.
- In 1952 Norwegian manual therapists adopted these short-lever manipulative techniques.



*Figure 1.6  
In 1952, we began to use short-lever  
rotation techniques*

- In the OMT Kaltenborn-Evjenth Concept, **biomechanical principles** form the core of the analysis and treatment of musculoskeletal conditions.
- » Translatory treatment in relation to the Kaltenborn Treatment Plane allows for safe and effective joint mobilization.

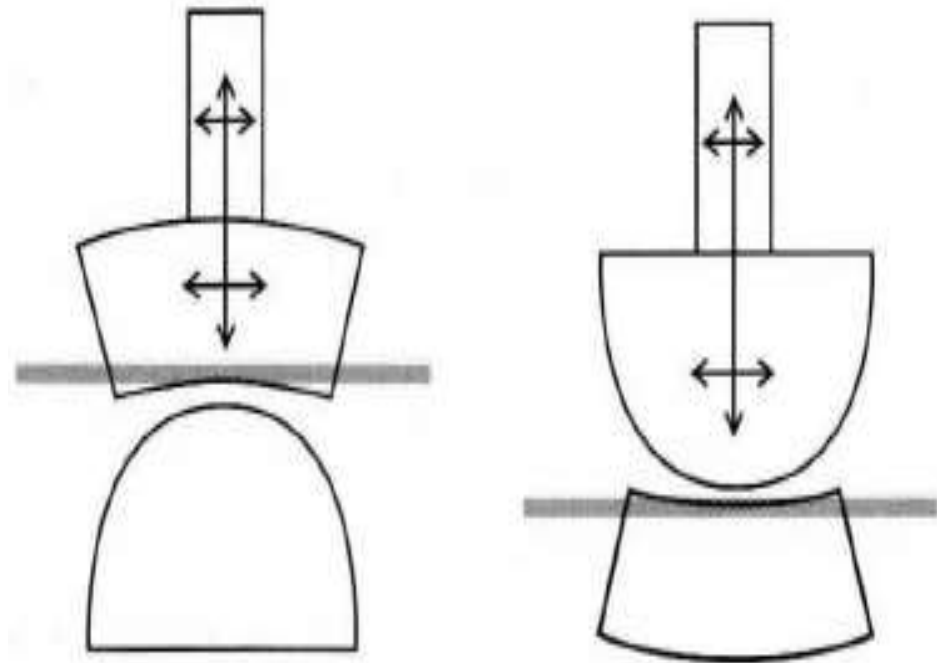


Figure 1.7

*In 1954, I incorporated the concept of translatory bone movement in relation to the treatment plane*

- » The therapist evaluates the translatoric joint play movements of traction and gliding by feeling the amount of **slack** in the movement and sensing the **end-feel**. The therapist uses grades of movement to rate the amount of joint play movement they palpate.





- Three-dimensional joint positioning, carefully applied before tests and mobilizations, refines and directs movement in the (actual) resting position, at the point of restriction, and in other joint positions for **greater specificity and effect**.
- » The Kaltenborn Convex-Concave Rule allows indirect determination of the direction of decreased joint gliding to insure normal joint mechanics during treatment.

- »»» The therapist evaluates and treats all **combinations of movements, coupled and non-coupled.**
- » The therapist uses specific evaluation and specific treatment, including special tests to localize symptomatic structures, and to treat hypomobility .

# Combination of techniques

- The use of multiple treatment techniques, often in one treatment session, has always been part of our system.
- For example, techniques **to improve joint mobility** are often preceded by
- pain-relief and soft-tissue-mobilization techniques.

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- **Self-treatment** is an important part of our system and may include instruction in
  - automobilization, autostretching, autotraction, strengthening, stabilization, or coordination exercises.

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- Advice on body mechanics and ergonomics is important to maintain improvements gained in therapy and to prevent recurrences.

# Trial treatment

- An experienced practitioner views **treatment procedures also as evaluation procedures**, interpreting the patient's response to each treatment in the context of their initial diagnostic hypotheses.
- **Keltenborn** formalized this concept within his system in 1952, with the term "***trial treatment,***"
- where the manual therapist confirms the initial physical diagnosis with a low-risk trial treatment as an additional evaluation procedure.

# Ergonomic principles for the therapist

- The OMT Kaltenbom-Evjenth Concept emphasizes good *therapist* body mechanics.
- An example of this was my development in the 1950's of the first **pneumatic high-low adjustable treatment table** designed for manual physical therapy practice.
- Our practitioners have since developed a number of treatment techniques and tools for efficiency and safety, including mobilization and fixation belts, wedges, and articulating tables.